

WHAT IS CLAIMED IS:

1. For use in a wireless network, a method of terminating a packet data call at a target mobile station operating in the wireless network, the method comprising the steps of:

receiving in a packet data server node of the wireless network first packet data directed to the target mobile station;

identifying in the first packet data a mobile identification number associated with the target mobile station;

using the mobile identification number to retrieve an IP address of the target mobile station from a first database associated with the packet data server node; and

forwarding the first packet data to the target mobile station using the retrieved IP address.

2. The method as set forth in Claim 1 further comprising the step of determining from a second database associated with the packet data server node a target packet controller function unit with which the target mobile station is currently in communication.

3. The method as set forth in Claim 2 further comprising the step of determining from the second database associated with the packet data server node a target base station controller with which the target mobile station is currently in communication.

4. The method as set forth in Claim 3 further comprising the step of transmitting a Registration Request message from the packet data server node to the target base station controller, the Registration Request message capable of causing the target base station controller to establish a first traffic channel to the target mobile station.

5. The method as set forth in Claim 4 further comprising the step of transmitting a Registration Response message from the target base station controller to the packet data server nodes after the first traffic channel has been established.

6. The method as set forth in Claim 5 further comprising the step of establishing a Point-to-Point Protocol (PPP) connection between the packet data server node and the target mobile station.

7. The method as set forth in Claim 6 further comprising the step of receiving in the packet data server node subsequent packet data directed to the target mobile station and adding the IP address of the target mobile station to the received subsequent packet data.

8. The method as set forth in Claim 7 further comprising the step of transmitting the received subsequent packet data from the packet data server node to the target mobile station via the PPP connection.

9. A wireless network capable of terminating a packet data call at a target mobile station operating in the wireless network, the wireless network comprising:

a plurality of base stations capable of communicating with a plurality of mobile station in a coverage area of the wireless network; and

a packet data server node capable of receiving first packet data directed to the target mobile station and identifying in the first packet data a mobile identification number associated with the target mobile station, wherein the packet data server nodes uses the mobile identification number to retrieve an IP address of the target mobile station from a first database associated with the packet data server node and forwards the first packet data to the target mobile station using the retrieved IP address.

10. The wireless network as set forth in Claim 9 wherein the packet data server node determines from a second database associated with the packet data server node a target packet controller function unit with which the target mobile station is currently in communication.

11. The wireless network as set forth in Claim 10 wherein the packet data server node determines from the second database associated with the packet data server node a target base station controller with which the target mobile station is currently in communication.

12. The wireless network as set forth in Claim 11 wherein the packet data server node transmits a Registration Request message to the target base station controller, the Registration Request message capable of causing the target base station controller to establish a first traffic channel to the target mobile station.

13. The wireless network as set forth in Claim 12 wherein the packet data server node is capable of receiving a Registration Response message from the target base station controller after the first traffic channel has been established.

14. The wireless network as set forth in Claim 13 wherein the packet data server node is capable of establishing a Point-to-Point Protocol (PPP) connection between the packet data server node and the target mobile station.

15. The wireless network as set forth in Claim 14 wherein the packet data server node is capable of receiving subsequent packet data directed to the target mobile station and adding the IP address of the target mobile station to the received subsequent packet data.

16. The wireless network as set forth in Claim 15 wherein the packet data server node is capable of transmitting the received subsequent packet data from the packet data server node to the target mobile station via the PPP connection.

17. A packet data server node for use in wireless network capable of terminating a packet data call at a target mobile station operating in the wireless network, wherein the packet data server node is capable of receiving first packet data directed to the target mobile station and identifying in the first packet data a mobile identification number associated with the target mobile station, and wherein the packet data server nodes uses the mobile identification number to retrieve an IP address of the target mobile station from a first database associated with the packet data server node and forwards the first packet data to the target mobile station using the retrieved IP address.

18. The packet data server node as set forth in Claim 17 wherein the packet data server node determines from a second database associated with the packet data server node a target packet controller function unit with which the target mobile station is currently in communication.

19. The packet data server node as set forth in Claim 18 wherein the packet data server node determines from the second database associated with the packet data server node a target base station controller with which the target mobile station is currently in communication.

20. The packet data server node as set forth in Claim 19 wherein the packet data server node transmits a Registration Request message to the target base station controller, the Registration Request message capable of causing the target base station controller to establish a first traffic channel to the target mobile station.